

ABSTRACT OF THE DISCLOSURE

A motor device with an automatically adjustable
 output torque includes two permanent magnets disposed
 on an inner surrounding wall surface of a hollow frame
 body and adapted to produce a first magnetic field, and
 an armature rotatable between the magnets. The
 armature includes an armature core having two core
 segments which are brought to alternately face the
 magnets respectively when the armature is rotated, and
 an armature winding adapted to produce a second
 magnetic field. An output shaft extends from one end
 of the armature core, and is adapted to drive a wheel
 of an electromotive vehicle. A commutator is
 electrically connected to the armature winding, and is
 rotatable with a mounting shaft extending from the
 other end of the armature core. Two brush members are
 connected to a DC power supply, and are disposed to
 respectively contact two conductive segments of the
 commutator so as to provide direct current thereto. A
 regulating winding is disposed on one of the armature
 core and the magnets to produce a third magnetic field.
 A controlling member is disposed to control the flow
 of direct current to the regulating winding to increase
 or decrease the amount of magnetic flux of the first
 magnetic field.

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